

PDF hosted at the Radboud Repository of the Radboud University Nijmegen

The following full text is a publisher's version.

For additional information about this publication click this link.

<http://hdl.handle.net/2066/22761>

Please be advised that this information was generated on 2017-12-05 and may be subject to change.



PREDICTORS OF SENSE OF COMPETENCE IN CAREGIVERS OF DEMENTED PERSONS

MYRRA J. F. J. VERNOOIJ-DASSEN,¹* JEAN M. G. PERSON² and
ALBERT J. A. FELLING³

¹Department of General Practice and Social Medicine, Centre for Quality of Care Research, ²Department of General Practice and Social Medicine, and ³Department of Methodology and Statistics, Catholic University Nijmegen, PO Box 9101, 6500 HB, Nijmegen, The Netherlands

Abstract—In this study a path analytic approach was used to investigate predictors of the sense of competence in primary caregivers of demented persons. Data were gathered from 141 pairs of demented persons living in the community and their informal primary caregivers. Analysis of the information reported by the primary caregivers indicated that sense of competence and its component domains were affected above all by behavioural problems of the demented person and degree of neuroticism of the primary caregiver. No significant influence was found on the sense of competence of formal support of home helps and district nurses. The results suggested that the amount of support the demented person received from other social network members only had a limited influence on the domains of sense of competence. Copyright © 1996 Elsevier Science Ltd

Key words—dementia, burden, sense of competence, social support, behavioural problems

INTRODUCTION

The progression of dementia presents problems not only for the person suffering from the syndrome, but also for the members of his informal social network. This is especially true for the social network member who takes principal responsibility for the provision of care: the informal caregiver (from now on referred to as caregiver). An important question in this regard is why some caregivers feel more capable than others of effectively meeting caregiving challenges. Is such perception of capability determined by the characteristics of the demented person, by the support from the social network of the demented person, or by the personal characteristics of the caregiver? A better understanding of the determinants of a caregiver's perceived capability of meeting caregiving challenges may contribute to the development of interventions that will enhance the caregiver's perceived capability.

Although the literature contains few differentiated theoretical models of predictors of caregiver capability, many studies have investigated the influence of specific factors. The findings of these studies provide a point of departure for the development of models. In the existing research, a variety of concepts have been used to denote the outcome of the caregiving process for the caregiver. Current conceptualizations refer to consequences of the demented person's incapacities, such as burden [1-3] and impact [4], or refer to consequences of the caregiver's capability, such as morale [5] and competence [6]. In their operationalizations all of these studies refer to the

perception of caregiving by the caregiver. As George and Gwyther [7] have pointed out, however, the consequences of the demented person's incapacities, and the caregiver's capability, appear to be but opposite sides of the same coin.

We use the concept *sense of competence* to denote the caregiver's feelings of being capable of caring for the demented person. We prefer competence instead of burden, because competence refers to the caregiver, while burden is related to the carereceiver. 'Sense' explicitly refers to the feelings of the caregiver. The sense of competence refers to the specific situation of caregiving and is not used as a general characteristic of the caregiver.

In this article we develop a conceptual model for exploring the determinants of the sense of competence shown by caregivers of demented persons living in the community. The model adopts the general theoretical approach used in Bengtson and Kuypers' [6] family-crisis model, namely systems theory in combination with a symbolic interactionistic perspective. The potential determinants of sense of competence specified in the conceptual model include characteristics of the demented person, characteristics of the demented person's social network, and characteristics of the caregiver. We also pay attention to the component domains of sense of competence; the advantage of such an approach is that it enables the researcher to examine predictors or correlates of specific domains of a phenomenon and to develop corresponding intervention strategies [3]. In this report we address the question: what factors influence the sense of competence of the caregivers of demented persons?

*Author for correspondence.

TOWARD A CONCEPTUAL MODEL

Sources of sense of competence

The theoretical approach underlying the model we present in this article was derived from the family-crisis model. This model describes a malignant spiral of increasing incompetence displayed by the members of an ageing family confronted with a hazardous event, or problem that they define as threatening. In such a context, an inability to deal adequately with changes may lead to a crisis. The conceptual model is based on two general theoretical approaches. The first approach, systems theory, has stimulated the study of the impact of dementia on the social network of the dementing person. Therefore relationships between characteristics of the demented person, the social network and the caregiver are included in the model. In the second, symbolic interactionist approach, the progression of dementia is viewed as a process in which the interaction between the demented person and his social network members is disturbed. The person suffering from dementia becomes less able to act according to accepted norms, with the consequence that the respective expectations and reactions of the demented person and his social network members may correspond poorly. As Kitwood and Bredin [8] pointed out, if the dementia is severe, the person's capacity for defining the situation, and for holding intentions and expectations in place, fails and fades. This symbolic interactionistic perspective led us to include the meaning that caregivers ascribe to the caregiving context as an element in our conceptual model. It is not possible to explore the meaning that dementing persons attach to the caregiving situation given the present state of research in this area. By combining systems theory and a symbolic interactionist perspective in our conceptual model, we show our agreement with the view that these two theoretical approaches can be seen as complementary and mutually enriching [9–11].

On the basis of the results and conclusions of existing empirical studies, we identified specific characteristics of the demented person, of his social network, and of the caregiver, that might have an impact on the outcomes of the caregiving process for the caregiver. These characteristics and the relevant research are discussed briefly below.

Characteristics of the demented person

We expected that several characteristics connected with the illness of the demented person would be especially important predictors of the caregiver's sense of competence. These characteristics include the severity and duration of dementia, behavioural problems, and need for assistance in activities of daily living (ADL). In most studies, the severity of dementia was assessed by a medical doctor; other types of information about the demented person were usually provided by the caregiver.

Severity of dementia. Studies of the effects of severity of dementia on the outcomes of the caregiving process for the caregiver have given inconsistent results. Some studies have reported that outcomes for caregivers were more negative when the cognitive status of the demented person was lower [12, 13], although Miller *et al.* [14] found the opposite; in other studies no direct association was found [1, 3, 5, 15]. Deimling and Bass [15] reported an indirect relationship mediated by disruptive behaviour of the demented person. Caregivers who provided care to more severely demented persons were found to be confronted with more agitated and apathetic behaviour and to experience more stress effects.

Duration of dementia. Existing research suggests that a positive relationship exists between the duration of dementia and the caregiver's ability to tolerate problems [12, 13, 16]. These results support the adaptation hypothesis, which suggests that the functioning of the caregiver either stabilizes or improves over time. However, two other hypotheses have been proposed regarding the relationship between the duration of dementia and caregiving outcomes. The wear-and-tear hypothesis proposes that both demented persons and caregivers experience progressive deterioration in functioning as the dementia progresses. The second, trait hypothesis, suggests that caregivers maintain a constant level of adaptation, which is determined by preexisting resources [17].

Behavioural problems. In most studies behavioural problems of demented persons (as reported by the caregiver) have been found to be related to higher caregiver burden or stress [2, 3, 13, 15, 18]. However, in other studies, behavioural problems were found to be positively associated with caregiver morale [16], or to have no relationship with caregiver outcomes [1]. The effects of particular domains of behavioural disturbance on specific domains of caregiver burden have also been studied. Disruptive behaviour and decreased social functioning have been found to increase negative changes in the relationship between the elder and the caregiver and other members of the social network. Disruptive behaviour also led to restrictions in caregiver's activities [15].

ADL impairment. ADL impairment refers to recipient's need for assistance in performing ADL. ADL impairment has been shown to be positively associated with level of dementia [2]. Greater ADL impairment has been found to be related to higher caregiver burden [3, 4, 15, 16], or to have no effect on caregiver outcomes [5, 19].

Characteristics of the demented person's social network

Informal support. Demented persons are usually supported by an informal network consisting of among others family and friends. In existing research, actual support from the informal social network has

been found to diminish caregiver burden [1, 20], or to have no effect on the outcomes for caregivers [5, 18, 21]. Perceived support, as experienced by the caregiver, was found to have a positive effect on the caregiver in two studies where no effects of potential or actual support were found [5, 13].

Formal support. In the Dutch health care system demented persons living at home have the opportunity to be supported on low own expenses by home helps and district nurses.

Formal support has been mentioned by caregivers of demented persons as one of their sources of instrumental support. Formal support is seen as a less important source of emotional support. Compared to informal support, formal support has been a less important source of interpersonal stress [22].

Characteristics of the caregiver

In exploring the research on the characteristics of the caregiver, we focused on those characteristics connected with the caregiving situation, as well as on factors that could influence the capacity of the caregiver to deal with difficult situations. We also searched for sociodemographic variables of potential relevance to caregiver outcomes.

Participation in care. Barusch and Spaid [18] and Pruchno and Resch [23] did not find an empirical relationship between the extent of the caregiver's participation in care, and burden. Despite this result, participation in care by the caregiver is theoretically relevant. According to the family-crisis model [6], greater participation can negatively influence caregiver competence when the caregiver imposes excessive demands on himself.

Neuroticism. Although we were unable to locate any study of neuroticism in caregivers of demented persons, several authors have called for the inclusion of psychological characteristics in analytical models [4, 24, 25]. Ormel [26] found that individuals showing a higher degree of neuroticism tended to perceive their situation more negatively. It has also been suggested that the receipt and perception of social support may be influenced by personality traits such as neuroticism [24, 25, 27].

Sociodemographic characteristics. In a number of studies, the burden of caregiving was found to be lower for male caregivers [3, 23, 28], although other studies reported no such gender differences [19, 20, 29]. Quayhagen and Quayhagen [30] found that the relationship between perceived social support and well-being was moderated by gender. Perceived social support appeared to have a positive effect on female caregivers, while no such effect was found for males.

Sharing a household with the demented person has been found to have negative consequences for the caregiver [3, 31]. The caregiver outcomes have been found to be unrelated to the caregiver's religion [16], socioeconomic status [20, 32], or age [20].

Conceptual model

The existing empirical findings are too inconsistent to provide the basis for a detailed conceptual model. Possible reasons for the inconsistency include sample differences, divergent conceptualizations and operationalizations of research factors, and differing analytical techniques. Nevertheless, the reviewed studies and our basic theoretical approach together suggest a number of potentially important predictors of the sense of competence shown by caregivers of demented persons. This allowed us to develop a conceptual model as a guideline for identifying predictors. Because of the inconsistent empirical results we did not specify whether potentially relevant relationships were positive or negative (see Fig. 1). Consistent with systems theory we study relationships between characteristics of the demented person, the social network and the caregiver. Consistent with a symbolic interactionistic perspective, we hypothesize that more objective factors may have an indirect influence, and more subjective factors a direct influence, on the caregiver's sense of competence. Subjective data may be regarded as those derived from reported feelings, attitudes or beliefs, whereas objective data concern observable phenomena, which are behavioural and can be counted [33]. A personality trait of the observer may also influence the perception. Combining these theoretical guidelines with empirical findings we hypothesize the relationships presented in Fig. 1.

In the conceptual model we developed, the more objective characteristic severity of dementia affects the caregiver's sense of competence indirectly, via the demented person's behavioural problems and ADL impairment, as reported by the caregiver. The recognition of patient's problems may be influenced by a personality trait of the caregiver. We suppose that the neuroticism of the caregiver influences the behavioural problems and ADL impairment. The duration of dementia exerts a direct influence on the caregiver's sense of competence.

The more objective characteristic number of other social network members providing some form of support to the demented person (participation social network) is indirectly related to sense of competence, via social support as perceived by the caregiver (referred to hereafter as 'perceived social support'). The aim of providing formal support is to alleviate and ease the care provided in the home. Therefore we hypothesize that the formal support of home helps and district nurses has a direct effect on caregiver's sense of competence.

Caregiver neuroticism is not only indirectly but also directly related to sense of competence. For reasons of economy, we combined living condition (i.e. whether the caregiver shares a household with the demented person) and gender. These two variables are featured in the model as together conditioning perceived social support. Finally, the

extent of participation in care of the caregiver exerts a direct influence on their sense of competence.

There was insufficient information to develop specific models for the individual domains of the sense of competence. We explored the same conceptual model for the domains.

METHODS

Sample

We located potential subjects for our study with the help of nearly all of the general practitioners in a region in the eastern part of the Netherlands; 91% (*n* = 166) of the physicians we approached co-operated. In the Netherlands almost all families have a general practitioner. The criteria for inclusion in the

study were: Alzheimer's disease or multi-infarct dementia, residence in the community, and an informal caregiver. Of the pairs of demented persons and their caregivers which met these criteria, 21% refused to participate. A total of 141 pairs took part in the study. The demented persons were on average 78 years of age, of whom 69% (*n* = 97) were female and 31% (*n* = 44) were male. The average age of the caregivers was 63 yr; 67% (*n* = 95) were female and 33% (*n* = 46) were male. Of the female and male caregivers, respectively 63 and 89% were sharing a household with the demented person. The sample of caregivers included 26% wives, 24% husbands, 28% daughters or daughters-in-law, 8% sons or sons-in-law, 13% female friends or neighbours, and 1% male friends or neighbours.

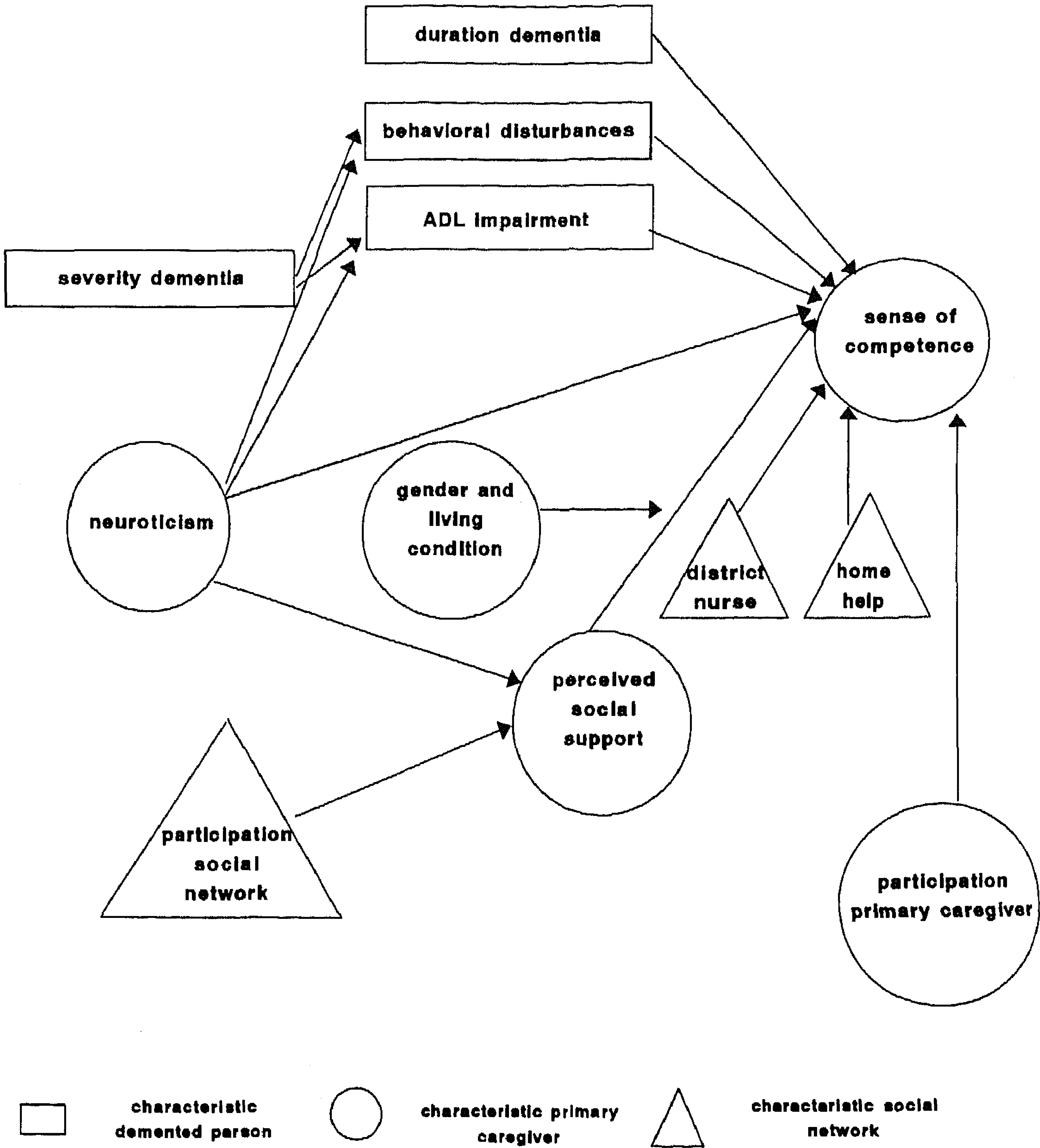


Fig. 1.

Table 1. Basic statistics on the measures used ($N = 141$)

	<i>n</i>	Range	Mean	SD
<i>Characteristics demented person</i>				
Severity of dementia				
Mild	18			
Moderate	82			
Severe	41			
Duration dementia		4-240	48.8	37.3
Behavioural disturbances				
Agitation		2-32	9.3	7.9
Apathy		0-32	13.8	7.1
Mood changes		1-18	4.3	3.7
ADL impairment		0-32	8.3	8.8
<i>Characteristics social network</i>				
Number of active informal network members		0-32	7.5	6.2
Home help	46			
District nurse	66			
<i>Characteristics of primary caregiver</i>				
Sense of competence		4-27	17.9	5.2
Satisfaction with demented person		0-7	5.5	2.0
Satisfaction as caregiver		0-10	8.8	2.5
Consequences for personal life		0-8	5.5	2.0
Perceived social work				
Instrumental support		0-4	2.3	1.0
Emotional support		2-6	5.3	1.0
Participation in care		1-20	9.7	4.6
Neuroticism		10-55	21.8	10.5

Measures

All of the measures, except for severity of dementia, relied on responses provided by the caregiver.

Severity of dementia. Severity of dementia was assessed by general practitioners, especially trained for this task, using the first four axes of the Brief Cognitive Rating Scale (BCRS): concentration, short-term memory, long-term memory, and orientation in time, place and person [34]. The scores were classified according to the three stages defined by Reisberg *et al.* [35]. Of the respondents, 13% suffered from mild, 59% from moderate, and 28% from severe dementia (see Table 1).

Duration of dementia. The duration of dementia was assessed in months.

Behavioural problems. To measure behavioural problems we designed a 30-item questionnaire, that was based on other questionnaires [36-38]. Each item consisted of a statement with responses to be selected from a five-point scale. A higher score reflects worse functioning. Using principal factor analysis we distinguished three types of behaviour: apathetic behaviour, e.g. sitting and doing nothing and keeping to oneself (11 items; $\alpha = 0.76$); agitated behaviour, e.g. irritability and suspiciousness (13 items; $\alpha = 0.63$); and mood changes, e.g. sadness (6 items; $\alpha = 0.72$) [39].

ADL impairment. A five-point scale was used to rate the demented person's need for assistance in ADL (five items, e.g. dressing, washing; $\alpha = 0.94$) [40].

Informal network: number of social network members delivering some form of support. The number of network members (apart from the caregiver) providing some form of support to the demented person was assessed, using the rewarding exchange

method developed by McCallister and Fischer [41]. Support was operationalized using ADL (five items), IADL (Instrumental ADL: 11 items, e.g. preparing dinner, cleaning, making repairs to the exterior of the house), and social contacts (six items, e.g. visiting the demented person, going out with the demented person).

Formal support. The formal support was measured by asking the caregiver whether the demented person received the assistance of a home help or district nurse.

Sense of competence. The concept was operationalized in terms of questions derived from issues identified in the family-crisis model [6]. Most of these issues were included in the burden scale developed by Zarit *et al.* [1].

The content validity of the sense of competence questionnaire was evaluated on the basis of classifications of the items made by a panel of 39 experts, and the construct validity was assessed through factor analysis of the responses of the caregivers. There was a high degree of correspondence between the experts' judgments and the results of the factor analysis.

Sense of competence had a reliability coefficient (Cronbach's alpha) of 0.79 (27 items). Three domains were distinguished by factor analysis: "satisfaction with the demented person as a recipient of care" (seven items; $\alpha = 0.55$), "satisfaction with one's own performance as a caregiver" (12 items, $\alpha = 0.63$) and "consequences of involvement in care for the personal life of the caregiver" (eight items; $\alpha = 0.50$). "Satisfaction with one's own performance as a caregiver" was comparable with the domain adequate role performance of Bengtson and Kuypers. "Consequences of involvement in care for the personal life

of the caregiver” was comparable with the domain constraint or inhibitions on caregiver behaviour or relationship arising from the caregiver role, indicated in the burden scale by Greene and Monahan [42].

Although the reliability coefficients of the domains are low, we used these factors to explore domain-specific patterns. Sumscores were calculated on a dichotomized five-point scale.

Our questionnaire has been used in several other studies. In a study among caregivers of an outpatient psychogeriatric clinic ($n = 91$) the overall α was 0.88 [43]. Hadderingh *et al.* [44] obtained a mean score of 16.8 ($n = 40$) for the sense of competence of caregivers of demented persons living at home.

Perceived social support. Perceived social support assesses the supportive role of the social network as perceived by the caregiver. We consider perceived social support to be a characteristic of the caregiver. Perceived social support refers to the degree to which a person believes that he is cared for or loved, is valued, and belongs to a network of communication and mutual obligation [45]. This conceptualization is based on Cobb’s [46] definition of social support. Perceived social support was measured using a 16-item questionnaire developed by Ormel *et al.* [45], which we adapted to the caring situation. Factor analysis identified two factors, which are similar to those found by Thoits [24]. The factors identified in our analysis were: perceived instrumental support (four items, $\alpha = 0.66$)—which includes the sense of sharing the caregiving tasks; and perceived emotional support (six items, $\alpha = 0.70$)—which includes experiencing understanding from others concerning the difficulties of caregiving. The items refer to the perception of emotional and instrumental support as given by six persons, who are important for the caregiver. These persons have been selected by the caregiver from the social network of the demented person and their own social network. The caregiver considered these persons as important in the care for the demented person or important in their personal life. Perceived emotional support is the total of emotional support divided by the number of supportive persons.

Perceived instrumental support is measured in a similar way.

Participation in care. The extent of the caregiver’s participation in care was determined using the same rewarding exchange method as used to assess the number of social network members delivering some form of support. The support activities of the caregiver were counted.

Neuroticism. The caregiver’s neuroticism, a personality trait, was measured using the Amsterdam Biographical Questionnaire [47], as adjusted by Ormel [26]. The concept of neuroticism is based on Eysenck’s [48] theories; neuroticism indicates inadequacy in dealing with the requirements of life. The scale includes items that assess the caregiver’s feelings of loneliness and unhappiness, and physical symptoms such as trembling hands.

Sociodemographic characteristics. Gender is combined with living condition for females. There were not enough males involved in the study to differentiate between whether or not sharing a household with the demented person.

RESULTS

Empirical model of sense of competence

A path analytic approach was used to test the direct effects (β s) in the model. Path analysis also allows the calculation of the indirect effects of certain variables. In this empirical model, the global measures of Fig. 1 (severity of dementia, behavioural problems and perceived social support) are replaced by specific measures, as indicated under ‘measures’ in the previous paragraph.

The results of the path analysis of the factors influencing the caregiver’s sense of competence are displayed in Table 2. The severity of dementia had no direct effect on sense of competence. However, its indirect influence was substantial. The more severe the dementia, the more apathetic the behaviour of the demented person. Higher levels of apathetic behaviour of the demented person (as reported by the caregiver) negatively influenced the sense of competence of the caregiver. The agitated behaviour and

Table 2. Standardized direct and total effects and adjusted R^2 for model of the sense of competence of primary caregivers

Dependent variable	Independent variable	Direct effect	Total effect	adj. R^2
Agitation Apathy	Neuroticism	0.45*	0.45	0.19
	Severity of dementia			
	Mild	−0.54*	−0.54	
Mood changes	Moderate	−0.33*	−0.33	0.24
	Mood changes	0.22*	0.22	
	Neuroticism	0.40*	0.40	
Sense of competence	Agitation	−0.45*	−0.45	0.15
	Apathy	−0.31*	−0.31	
	Neuroticism	−0.27	0.50	
	Severity of dementia			
	Mild	ns	0.17	
	Moderate	ns	0.10	
	Mood changes	ns	−0.07	

* $P < 0.01$.

mood changes of the demented person (also reported by the caregiver) were associated with each other. Caregivers with higher neuroticism scores reported that the demented person engaged in more agitated behaviour and underwent more mood changes. Furthermore, higher levels of agitated behaviour, as reported by the caregiver, led to a lower sense of competence of the caregiver.

The direct effect of the caregiver's neuroticism on their sense of competence was moderately negative. However, there were strong indirect effects. Therefore, the total effect of neuroticism was substantial. These findings could reflect an influence of the caregiver's neuroticism on the behaviour of the elder person. They might also reflect an influence of neuroticism on the caregiver's perception of the behaviour of the demented person. The adjusted R^2 for the total model was 0.51 [$F(3,131) = 48.30$; $P < 0.0001$]. Due to missing values, 135 observations were included in the analysis.

The strong association between neuroticism of the primary caregiver and the latter's reports of mood changes and agitated behaviour in the demented person led to an inspection of the data for possible contamination. Further data analyses, including a principal factor analysis that identified distinct factors, made it clear that the degree of neuroticism of the primary caregiver is a characteristic that can be distinguished from agitated behaviour and mood changes in the demented person as reported by the primary caregiver [49].

Empirical models for the domains of sense of competence

Some of the characteristics that were included in the conceptual model did not affect the global sense of competence, but were found to be predictors of one of the domains of sense of competence. There were positive effects resulting from both duration of dementia ($\beta = 0.18$; $P \leq 0.05$) and ADL impairment ($\beta = 0.16$; $P \leq 0.10$) on the domain satisfaction with one's own performance as caregiver. Higher ADL impairment was predicted by a higher severity of dementia (mild $\beta = -0.42$, moderate $\beta = -0.46$; $P \leq 0.01$), and correlated with higher perceived instrumental support ($r = 0.26$; $P \leq 0.01$). The latter was in turn positively influenced by the number of other network members providing support to the demented person ($\beta = 0.20$; $P \leq 0.01$).

More participation in care by the caregiver had negative consequences for the personal life of the caregiver ($\beta = -0.32$; $P \leq 0.01$), while perceived emotional support had a positive effect on this domain ($\beta = 0.17$; $P \leq 0.05$). Perceived emotional support was negatively influenced by the degree of neuroticism of the caregiver ($\beta = -0.33$; $P \leq 0.01$), but was not influenced by the number of other network members providing support to the demented person.

Compared with the global sense of competence, no new predictors of the domain satisfaction with the demented person as a recipient of care have been found.

No significant influence on the global sense of competence or its domains has been found to result from the formal support of home helps or district nurses.

DISCUSSION

In the present research, the caregiver's sense of competence and its component domains appear to have been influenced above all by the interaction between the caregiver and the demented person. The negative effects of the demented person's agitated behaviour and mood changes on the sense of competence of the caregiver parallel findings reported in other studies (e.g. Zarit *et al.* [13], Deimling and Bass [15]). In these studies, too, the behaviour of the demented person was assessed by the caregiver. Of particular interest is the present finding of an indirect effect of caregiver neuroticism. Although it is not clear whether a caregiver's neuroticism might elicit agitated behaviour or mood changes in the demented person, or colour the caregiver's perceptions, these results show that a personality trait of the caregiver may influence caregiver outcomes. These results underscore the importance of including psychological characteristics in analytical models (e.g. Thoits [24]).

The absence of a positive influence from either the informal or the formal social network emphasizes that not all interactions are supportive. No positive or negative influence on the sense of competence has been found to result from informal or formal social support. However, additional information about the influence of social support can be derived from the predictors of the domains of sense of competence. The results reveal the complexity of social support. Perceived emotional support was not predicted by the number of network members providing support to the demented person, but by the neuroticism of the caregiver. When the caregiver perceived more emotional support the 'consequences of involvement in care for the personal life of the caregiver' were less negative. The instrumental support had an indirect and weak positive effect on the sense of competence domain 'satisfaction with one's own performance as a caregiver'. The weak indirect effect might be explained by the suggestion of Silverstein and Bengtson [50] that the importance of instrumental support is conditional rather than universal in nature. This might also be one of the reasons that formal support lacks a significant effect. Another reason might be that formal support is primarily directed at the demented person and not at the caregiver.

The relations predicted in the conceptual model were empirically supported by the analyses of either the global measures or one of its domains, with the exception of the interaction between perceived social

support and the caregiver categories: gender and living condition, the influence of neuroticism on ADL impairment and the influence of support by home helps and district nurses.

Investigation of the domains of sense of competence and of types of behavioural problems and perceived social support revealed specific patterns that would have remained undetected in an analysis of only the global constructs. These results support Kosberg *et al.* [3] recommendation that domain-specific measures should be used in investigations of the complex dynamics of caregiving.

The findings reported here have several implications for practitioners, especially when they are considered from the theoretical perspectives which guided the research. Our results, together with systems theory, suggest that characteristics of the demented person influence the sense of competence of the caregiver, but that the possibility might be considered that the caregiver might also influence the behaviour of the patient. The findings are consistent with the symbolic interactionistic premise that one can expect characteristics reflecting the way in which individuals perceive their situation to exert direct influences on social interactions and their outcomes. These results suggest that the meaning that the caregivers attach to the situation may be the key to changing their perspective, and perhaps even the interaction between the caregiver and the demented person. The results also provide clues as to how specific interventions might be designed. The predictors of caregiver's sense of competence that emerged in our research suggest that it is important to recognize, clarify, and discuss the behaviour of the demented person with the caregiver. This might change the caregiver's perception of the demented person's behaviour. As Jones [51] stated, caring for dementia sufferers does not "come naturally". There is a need for support directed at the specific problems of caregivers. Specific guidance is needed to understand the demented person and to respond to his behaviour. It also appears to be important to be able to identify the self-imposed demands of the caregiver. Considering that not all interactions are emotionally supportive, special attention is needed, in training practitioners, to ensure that they gain supportive skills and that they implement supportive interactions, such as showing empathy with the difficulties of caregiving. These suggestions are consistent with the guidelines provided by Bengtson and Kuypers in their family-support model [6]. An intervention based on this model, carried out by especially trained home helps, yielded encouraging results [52].

The results of our research suggest that the caregiver's personal strength and perception of the caregiving situation are more influential than the severity of dementia or the amount of social support provided by other members of the demented person's social network. In future research the interaction

between the caregiver and the demented person should be examined. It will be challenging and worthwhile to use experimental designs to investigate the effects of interventions aimed at influencing this interaction.

Acknowledgement—This research was supported by a grant from the Praevention Fonds.

REFERENCES

1. Zarit S. H., Reeve K. E. and Bach-Peterson J. Relatives of the impaired elderly: correlates of feelings of burden. *Gerontologist* 20, 649, 1980.
2. Pearson J., Verma S. and Nellett C. Elderly psychiatric patient status and caregiver perceptions as predictors of caregiver burden. *Gerontologist* 28, 79, 1988.
3. Kosberg J. I., Cairl R. E. and Keller D. M. Components of burden: interventive implications. *Gerontologist* 30, 236, 1990.
4. Poulshock S. W. and Deimling G. T. Families caring for elders in residence: issues in the measurement of burden. *J. Geront.* 39, 230, 1984.
5. Gilhooly M. L. M. The impact of caregiving on caregivers: factors associated with the psychological well-being of people supporting a dementing relative in the community. *Br. J. med. Psychol.* 57, 35, 1984.
6. Bengtson V. L. and Kuypers J. The family support cycle: psychosocial issues in the aging family. In *Life-span and Change in a Gerontological Perspective* (Edited by Munnichs J. M. A., Olbrich E., Mussen P. and Coleman P. G.), pp. 257–273. Academic Press, New York, 1985.
7. George L. K. and Gwyther L. P. Caregiver well-being: a multidimensional examination of family caregivers of demented adults. *Gerontologist* 26, 253, 1986.
8. Kitwood T. and Bredin K. Towards a theory of dementia care: personhood and well-being. *Ageing Soc.* 12, 269, 1992.
9. Marshall V. W. Dominant and emerging paradigms in the social psychology of aging. In *Later Life: the Social Psychology of Aging* (Edited by Marshall V. W.), pp. 9–31. Sage, Beverly Hills 1986.
10. Wellman B. and Hall A. Social networks and social support: implications for later life. In *Later Life: the Social Psychology of Aging* (Edited by Marshall V. W.), pp. 191–231. Sage, Beverly Hills, 1986.
11. Bengtson V. L. Comparative perspectives on the microsociology of aging: methodological problems and theoretical issues. In *Later Life: the Social Psychology of Aging* (Edited by Marshall V. W.), pp. 304–336. Sage, Beverly Hills, 1986.
12. Klusmann D., Luders I., Bruder J. and Lauter H. Die Betreuung kranker alter Menschen im Mehrgenerationenhaushalt-Zwischenergebnisse eines laufenden Forschungsprojektes. *Akt Geront.* 11, 152, 1981.
13. Zarit S. H., Todd P. A. and Zarit J. M. Subjective burden of husbands and wives as caregivers: a longitudinal study. *Gerontologist* 26, 260, 1986.
14. Miller B., McFall S. and Montgomery A. The impact of elder health, caregiver involvement, and global stress on two dimensions of caregiver burden. *J. Geront.* 46, S9, 1991.
15. Deimling G. T. and Bass D. M. Symptoms of mental impairment among elderly adults and their effects on family caregivers. *J. Geront.* 41, 778, 1986.
16. Motenko A. K. The frustrations, gratifications, and well-being of dementia caregivers. *Gerontologist* 29, 166, 1989.
17. Haley W. E. and Pardo K. M. Relationship of severity

- of dementia to caregiving stressors. *Psychol. Aging* 4, 389, 1989.
18. Barusch A. S. and Spaid W. M. Gender differences in caregiving: why do wives report greater burden? *Gerontologist* 29, 667, 1989.
 19. Carlson K. W. and Robertson S. E. The Influence of impairment on the burden experienced by spouses of partners with dementia. *Can. J. Rehab.* 3, 213, 1990.
 20. Pratt C. C., Schmall V. L., Wright S. and Cleland M. Burden and coping strategies of caregivers to Alzheimer's patients. *Family Relations* 34, 27, 1985.
 21. Robinson K. M. Predictors of burden among wife caregivers. *Scholarly Inquiry for Nursing Practice* 3, 189, 1990.
 22. Suitor J. J. and Pillemer K. Support and interpersonal stress in the social networks of married daughters caring for parents with dementia. *J. Geront.* 48, S1, 1993.
 23. Pruchno R. A. and Resch N. L. Husbands and wives as caregivers: antecedents of depression and burden. *Gerontologist* 29, 159, 1989.
 24. Thoits P. A. Conceptual, methodological, and theoretical problems in studying social support as a buffer against life stress. *J. Hlth Soc. Behav.* 23, 145, 1982.
 25. Orth-Gomér K. and Undén A. The measurement of social support in population surveys. *Soc. Sci. Med.* 24, 83, 1987.
 26. Ormel J. Neuroticism measured by the questionnaire: a personality trait or a measure for psychosocial stress? *Ned. Tijdschrift Psychol.* 35, 223, 1980.
 27. Henderson S., Byrne D. G., Duncan-Jones P., Adcock S., Scott R. and Steele G. P. Social bonds in the epidemiology of neurosis: a preliminary communication. *Br. J. Psychiat.* 132, 463, 1978.
 28. Horowitz A. Sons and daughters as caregivers to older parents: differences in role performance and consequences. *Gerontologist* 25, 612, 1985.
 29. Argyle N., Jestice S. and Brook C. P. B. Psychogeriatric patients: their supporters' problems. *Age Ageing* 14, 355, 1985.
 30. Quayhagen M. P. and Quayhagen M. Differential effects of family-based strategies on Alzheimer's disease. *Gerontologist* 28, 391, 1988.
 31. Harper S. and Lund D. A. Wives, husbands and daughters caring for institutionalized and noninstitutionalized dementia patients: toward a model of caregiving burden. *Int. J. Aging Hum. Devel.* 30, 241, 1990.
 32. Morycz R. K. Caregiving strain and the desire to institutionalize family members with Alzheimer's disease: possible predictors and model development. *Res. Aging* 7, 329, 1985.
 33. Olson D. H. Commentary: struggling with congruence across theoretical models and methods. *Family Process* 24, 203, 1985.
 34. Reisberg B., London E. and Ferris H. F. The Brief Cognitive Rating Scale: language and mood concomitants in primary degenerative dementia. *Psychopharmac. Bull.* 19, 702, 1983.
 35. Reisberg B., Borenstein J., Franssen E., Shulman E., Steinberg G. and Femis S. H. Remediabel behavioral symptomatology in Alzheimer's disease. *Hosp. Community Psychiat.* 37, 1199, 1986.
 36. Gurel L., Linn M. W. and Linn B. S. Physical and mental impairment of function evaluation in the aged: the PAMIE Scale. *J. Geront.* 27, 83, 1972.
 37. Greene J. G., Smith R., Gardiner M. and Timburg G. C. Measuring behavioral disturbances of elderly demented patients in the community and its effects on relatives: a factor analytic study. *Age Ageing* 11, 121, 1982.
 38. Gilleard C. J. *Living with Dementia, Community Care of the Elderly Mentally Informed*. Croomhelm, London, 1984.
 39. Lamers C., Muskens J. and Hogeling J. Demented Persons. In *Homecare for Demented Persons* (Edited by Vernooij-Dassen M. and Persoon J.), pp. 67-83. Katholieke Universiteit Nijmegen, Nijmegen, 1990.
 40. Cobussen J. G., Peters H. J. M. and Duine T. J. *Observation Psycho-geriatry (OPG): Instruments for Rating Ability of Psychogeriatric Patients*. Stichting SAMIVOZ, Den Bosch, 1984.
 41. McCallister L. and Fischer C. S. A procedure for surveying personal networks. *Sociol. Meth. Res.* 7, 131, 1978.
 42. Greene V. L. and Monahan D. J. The effect of a professionally guided caregiver support and education group on institutionalization of care receivers. *Gerontologist* 27, 716, 1987.
 43. Gerritsen J. C., Ende van der P. C. and Wolffensperger E. W. *Evaluation of a Psychiatric Policlinic*. Styx, Groningen, 1992.
 44. Hadderingh E., Kootte M. and Velde B. P. *Care for Demented Persons Living at Home*. Uitgave Dementie Onderzoek, Groningen, 1991.
 45. Ormel J., Sanderman R., Wiersma D. and Jong A. de. *Social Support: Operationalization and Relationships with Social Network*. Vakgroep Psychiatrie Rijksuniversiteit Groningen, Groningen, 1984.
 46. Cobb S. Social support as a moderator of life stress. *Psychosom. Med.* 38, 300, 1976.
 47. Wilde G. J. S. *Neuroticism Measured by a Questionnaire*. van Rossen, Amsterdam, 1963.
 48. Eysenck H. J. *The Structure of Human Personality*. Methuen, London, 1953.
 49. Vernooij-Dassen M. J. F. J. *Dementia and Homecare: Determinants of the Sense of Competence of Primary Caregivers and the Effect of Professionally Guided Caregiver Support*. Swets & Zeitlinger, Lisse, 1993.
 50. Silverstein M. and Bengtson V. L. Does intergenerational social support influence the psychological well-being of older parents? The contingencies of declining health and widowhood. *Soc. Sci. Med.* 38, 943, 1994.
 51. Jones G. Introduction. In *Care-giving in Dementia: Research and Applications* (Edited by Jones G. M. M. and Miesen B. M. L.), pp. 1-4. Routledge, London, 1992.
 52. Vernooij-Dassen M., Huygen F., Felling A. and Persoon J. Home care for dementia patients. *J. Am. Geriatr. Soc.* 43, 456, 1995.